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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/490,630	01/24/2000	Andrew W Wilson	ADAPP085B	7417

25920 7590 05/07/2003

MARTINE & PENILLA, LLP  
710 LAKEWAY DRIVE  
SUITE 170  
SUNNYVALE, CA 94085

EXAMINER

NGUYEN, THANH T

ART UNIT	PAPER NUMBER
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2143

DATE MAILED: 05/07/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

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**Office Action Summary**

Application No.

09/490,630

Applicant(s)

WILSON ET AL.

Examiner

Tammy T Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE (3) MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 19 March 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_ 6) ☐ Other:



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## Detailed Office Action

1. Claims 1-22 are presented for examination.

### *Response to Arguments*

2. Applicant's arguments filed on March 19, 2003 have been fully considered, however they are not persuasive because of the following reasons:

3. Applicants argue that Muller does not disclose usage of storage encapsulation protocol (SEP) or simple transport protocol (STP). In response to Applicant's argument, the Patent Office maintain the rejection because Muller does disclose usage of storage encapsulation protocol (SEP) or simple transport protocol (STP) as shown in col.2, lines 35-50, col.40, lines 42-55, show that it works as the same function as simple transport protocol (STP) that is configured to eliminate the overhead and inefficiencies associated with prior art transport protocol, such as TCP.

4. Therefore, the Examiner asserts that cited prior arts teach or suggest the subject matter broadly recited in independent claims 1, 13, 19, and 20. Claims 2-12, 14-18, 21, and 22 are also rejected at least by the virtue of their dependency on independent claims and by other reasons set forth in the previous office action [see paper no. 4]. Accordingly, claims 1-22 are respectfully rejected.

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

6. Claims 1-22 rejected under 35 U.S.C. 102(e) as being clearly anticipated by Muller et al (USPN 6,453,360 B1 – Date of Patent: September 17, 2002, herein referred to as “Muller”).

7. As to claim 1, Muller teaches the invention as claimed, including a method for processing storage data that is to be communicated over a network, comprising:

providing storage data to be transmitted over a network (col.1, line 64 to col.2, line 5, col.2 lines 19-33, and col.2, line 59 to col.3, line 15);

serializing the storage data using storage encapsulation protocol (col.2, lines 25-50) headers to generated serialized storage data (col.23, line 57 to col.24, line 11, col.23, lines 18-34, and col.2, lines 6-33);

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encapsulating the serialized storage data using a simple transport protocol (col.40, lines 42-55) to generate simple transport protocol (col.40, lines 42-55) data segments of the storage data; and

encapsulating each of the simple transport protocol data segments into Ethernet frames (col.21, lines 12-44).

8. As to claim 2, Muller teaches the invention as claimed, wherein the serializing of the storage data using storage encapsulation protocol headers to generate serialized storage data includes:

receiving the storage data, the storage data including one or both of commands and data, the commands including write commands, read commands, control commands, and status commands (col.2, line 59 to col.3, line 15);

selecting portions of the received storage data to be serialized, the selected portions including commands and data (col.5, lines 40-53); and

appending storage encapsulation protocol headers to each of the selected portions (col.14, lines 22-47).

9. As to claim 3, Muller teaches the invention as claimed, wherein the encapsulating of the serialized storage data using a simple transport protocol to generate simple transport protocol data segments of the storage data includes:

selecting portions of the serialized storage data (col.2, lines 19-33); and

appending simple transport protocol headers to the selected portions to generate the simple transport protocol data segments of the storage data (col.14, lines 22-47).

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10. As to claim 4, Muller teaches the invention as claimed, wherein the encapsulating of each of the simple transport protocol data segments into Ethernet packets includes:

generating media access controller (MAC) header (col.12, lines 63-67, and col.20, lines 36-44);

appending the simple transport protocol segments to the MAC header (col.48, lines 49-67, and col.20, lines 36-44); and

appending a cyclic redundancy check (CRC) to the simple transport protocol segments (col.51, lines 1-11, and col.66, lines 33-39).

11. As to claim 5, Muller teaches the invention as claimed, wherein the simple transport protocol headers each include at least a handle field, a type field, a length field, a sequence number field, and an acknowledgment field (col.8, lines 55-67, and col.14, lines 34-47).

12. As to claim 6, Muller teaches the invention as claimed, wherein the handle field is used to exchange a handle during the commencement of a session, the handle being exchanged between a initiator and a target of the network (col.16, lines 46-61).

13. As to claim 7, Muller teaches the invention as claimed, wherein the sequence number field is configured to count Ethernet frames (col.20, lines 36-44, and col.6, lines 1-45).

14. As to claim 8, Muller teaches the invention as claimed, wherein the acknowledgment field is used to exchange positive and negative acknowledgments of transactions (col.34, lines 42-56, and col.33, lines 1-14).

15. As to claim 9, Muller teaches the invention as claimed, wherein the storage encapsulation protocol contains a tag so that data segments and data segments of the storage data can be matched to a correct command (col.47, line 30 to col.48, line 40).

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16. As to claim 10, Muller teaches the invention as claimed, wherein the STP transport protocol is configured to provide a stream of bytes arriving in the same order as they were sent (col.111, lines 22-40).

17. As to claim 11, Muller teaches the invention as claimed further comprising:  
appending an IP header to each of the simple transport protocol data segments (col.3, lines 16-42).

18. As to claim 12, Muller teaches the invention as claimed, wherein the storage data is selected from one of SCSI data, ATAPI data, and UDMA data (col.8, lines 50-65).

19. As to claim 13, Muller teaches the invention as claimed, including a method for communicating storage data over an Ethernet network using a non-TCP lightweight transport protocol, comprising:

providing data having a peripheral device protocol format, the data to be communicated over the Ethernet network (col.3, lines 42-64, and col.8, lines 3-9);

selecting portions of the data (col.2, lines 19-33);

attaching storage encapsulation (SEP) headers (col.2, lines 35-50) to the selected portions of the data (col.29, line 65 to col.20, line 9, and col.43, lines 5-15);

attaching simple transport protocol (STP) (col.40, lines 42-55) headers to one or more of the selected portions (col. 14, lines 22-47) having the SEP headers to produce STP packets (col.40, lines 42-55); and

encapsulating the STP packets into Ethernet frames for communication over the Ethernet network (col.2, lines 19-58, and col.58, lines 42-63).

20. As to claim 14, Muller teaches the invention as claimed, wherein the peripheral device

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protocol format is one of a SCSI format, an ATAPI format, and a UDMA format (col.8, lines 50-65).

21. As to claim 15, Muller teaches the invention as claimed, wherein the STP headers include at least a handle field, a type field, a length field, a sequence number field, and an acknowledgment field (col.8, lines 55-67, and col.14, lines 34-47).

22. As to claim 16, Muller teaches the invention as claimed, wherein the handle field is used to exchange a handle during the commencement of a session, the handle being exchanged between a initiator and a target of the network (col.16, lines 46-61).

23. As to claim 17, Muller teaches the invention as claimed, wherein the sequence number field is configured to count Ethernet frames (col.20, lines 36-44).

24. As to claim 18, Muller h teaches the invention as claimed, wherein the acknowledgment field is used to exchange positive and negative acknowledgments of transactions (col.34, lines 42-56, and col.33, lines 1-14).

25. As to claim 19, Muller teaches the invention as claimed, including a method for communicating data over an Ethernet network using a non- TCP lightweight transport protocol, comprising:

providing data having a virtual interface format, the data to be communicated over the Ethernet network (col.18, lines 42-58, and col.16, lines 10-24);

selecting portions of the data (col.2, lines 19-33); attaching simple transport protocol (STP) headers to the selected portions of the data to produce STP packets (col.40, lines 42-55); and

encapsulating the STP packets into Ethernet frames for communication over the Ethernet



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network (col.40, lines 42-55).

26. As to claim 20, Muller teaches the invention as claimed, including a method for communicating data over a network using a non-TCP lightweight transport protocol, comprising:

providing data, the data to be communicated over the network (col.40, lines 42-55);

selecting portions of the data (col.2, lines 19-33);

attaching simple transport protocol (STP) headers to the selected portions of the data to produce STP packets (col.40, lines 42-55); and

encapsulating the STP packets into frames for communication over the network (col.40, lines 42-55).

27. As to claim 21, Muller teaches the invention as claimed, wherein the data is one of storage data, network data, file data, and virtual interface data (col.15, lines 12-26, and col.8, lines 3-9).

28. As to claim 22, Muller teaches the invention as claimed, wherein the network is configured to communicate storage data (col.4, lines 47-60, and col.8, lines 22-29)

### ***Conclusion***

29. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

30. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO**


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MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

31. Any inquiries concerning this communication or earlier communications from the examiner should be directed to **Tammy T. Nguyen** who may be reached via telephone at **(703) 305-7982**. The examiner can normally be reached Monday through Friday between 8:00 a.m. and 4:30 p.m. eastern standard time. If you need to send the Examiner, a facsimile transmission regarding After Final issues, please send it to **(703) 746-7238**. If you need to send an Official facsimile transmission, please send it to **(703) 746-7239**. If you would like to send a Non-Official (draft) facsimile transmission the fax is **(703) 746-7240**. If attempts to reach the examiner by telephone are unsuccessful, the Examiner's Supervisor, **David Wiley**, may be reached at **(703) 308-5221**.

Any response to this office action should be mailed to: **Director of Patents and Trademarks Washington, D.C. 20231**. Moreover, hand-delivered responses should be delivered to the Receptionist, located on the **fourth floor of Crystal Park 11, 2121 Crystal Drive Arlington, Virginia**.

*Tammy T. Nguyen*

  
**DAVID WILEY**  
**SUPERVISORY PATENT EXAMINER**  
**TECHNOLOGY CENTER 2100**